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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,219	09/24/2003	Masami Saito	8001-1173	1585
466	7590	07/09/2004	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			SEVER, ANDREW T	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,219

Applicant(s)

SAITO, MASAMI

Examiner

Andrew T Sever

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 13 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/2004 and 9/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 8 and 15.

Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the projector so arranged as protruding from the depth of the top of the desk must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement

Art Unit: 2851

sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant's claim 6 claims that the projector is arranged to protrude from the depth of the top of the desk. This is indefinite since it is unclear where the projector is arranged since it is protruding from the depth of the top of the desk. Since the specification and drawing do not teach what the depth of the top of the desk is it is unclear where the arrangement would be. In general the top of the desk does not have a "depth" as a location. The term "depth" both as generally used and as used in applicant's specification refers to a dimension such as depth, width, and height for example. Accordingly it is unknown where the projector is to protrude. For purposes of a prior art rejection it will be assumed

Art Unit: 2851

that the projector is to be arranged underneath the top of the desk with the mirror arrangement protruding out.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 4-6, 9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Inova (US 6,247,815.)

Inova teaches in figures 1, 2 and 4 a desk (taken as both the desk and work surface combined (see column 3 lines 13-16 which teaches they can be coupled together as one unit)) provided with a projector (26), wherein the projector is arranged below a top of the desk, and lights outputted from the projector are reflected by a mirror (28) and projected in front of the desk (onto screen 24).

With regards to applicant's claims 4 and 5:

As shown in figure 4 part of the top of the desk is missing and as shown in figure 5 the light passes through this part to display an image on the screen, which is in front of the desk.

Art Unit: 2851

With regards to applicant's claim 6 as nearly as can be understood:

See figure 5.

With regards to applicant's claim 9:

As seen figure 5 the screen (24) is arranged in front of the desk.

With regards to applicant's claim 12:

As shown in figure 5 the computer 20 is provided and positioned below the desk.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inova as applied to claims 1, 4-6, 9, and 12 above, and further in view of Janow (US 5,394,198.)

As described in more detail above Inova teaches a desk provided with a projector, wherein the projector is arranged below the top of the desk and a mirror reflects light outputted from the projector and projected in front of the desk. Inova, however, does not teach that the mirror is an aspherical mirror.

Art Unit: 2851

Janow teaches in figure 1 a similar system, however the image source is positioned above the surface of the desk. An aspherical mirror (concave which is taught in column 1 lines 43- 45 can be a parabolic which is a type of aspheric) is used to redirect the light from the image source to the screen. Janow teaches in column 1 that by using a curved mirror one can avoid having to use multiple displays as is taught by Inova which are costly, instead a single image display (projector) can be used which is caused by the aspherical mirror to fill a larger screen than it normally would. Accordingly since it is advantageous to use as few of projectors as possible, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an aspherical mirror in the desk with a projector taught by Inova as taught by Janow.

9. Claims 3, 10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inova as applied to claims 1, 4-6, 9, and 12 above.

As described in more detail above Inova teaches a desk provided with a projector, wherein the projector is arranged below the top of the desk and a mirror reflects light outputted from the projector and projected in front of the desk. Inova does not necessarily teach a transparent plate, however it would have been obvious to one of ordinary skill in the art at the time the invention was made to place one over the opening between parts 18 and 25 in order to keep dust and other containments from reaching the mirrors and projectors.

With regards to applicant's claim 10:

Art Unit: 2851

It is well known in the optical as well as projection arts that the optical distance between the projector and screen determines the size of the picture projected; accordingly it is obvious that the size of the picture projected is a result of the set-up position of the screen.

With regards to applicant's claim 13:

Inova does not specifically teach using the system for performing Computer-aided Design, however such use of computers with large screens is well known as acknowledged by applicant in applicant's description of the related prior art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Inova's system for this use as well.

10. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inova as applied to claims 1, 4-6, 9, and 12 above, and further in view of Kepley, JR. et al. (US 5,999,232.)

As described in more detail above Inova teaches a desk provided with a projector, wherein the projector is arranged below the top of the desk and light outputted from the projector is reflected by a mirror and projected in front of the desk. Inova, however, does not teach that the projector is movable specifically rotatable.

Kepley teaches in figure 1 a projection system, which uses a reflector 22 and a projector 20. Kepley further teaches in figures 4 and 5 that the projector is mounted in such a way that it is rotatable. Kepley teaches in column 5 lines 44-60 that this allows for easy access to the projector in order to change light bulbs and do other sorts of

Art Unit: 2851

maintenance as well as ordinary optical alignment of the projector with the mirrors and screen. Accordingly, since all projectors need this kind of maintenance, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the kind of mounting mechanism taught by Kepley in the system taught by Inova.

Allowable Subject Matter

11. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: Claim 11 is indicated as being allowable if re-written in independent form including the subject matter of rejected claims 9 and 1, since it was not found in the prior art a teaching of projecting an image on the screen such that the image on the screen extends below the top of the desk in combination with the subject matter of claims 9 and 1. Accordingly the claim would be allowable if re-written.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Art Unit: 2851

US 6,530,667 to Idaszak et al. teaches in figure 3 a desk based projection system with the projector beneath the top of the desk.

US 2003/0174292 to White teaches in figure 45 among others a desk projection system.

US 5,502,481 to Dentinger et al. teaches in figure 1 a large screen desk based projection system.

US 4,961,642 to Ogino teaches a rear projection system mounted over a table in figure 1

US 6,388,810 to Monson teaches in figure 5 a projection system which appears by inspection to be mounted on a desk and in figures 3 and 4 teaches the use of curved mirrors.

US 6,554,433 to Holler teaches in figure 10B a workplace projection system.

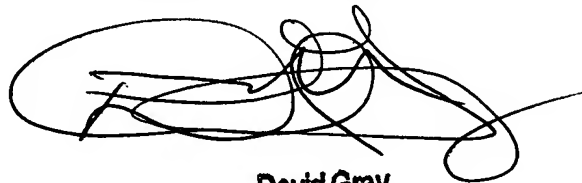
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 271-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

A handwritten signature in black ink, appearing to read 'David Gray', with a large, stylized flourish extending from the end of the signature.

David Gray
Primary Examiner